

Botanical and mycological terms for the Bank of Finnish Terminology in Arts and Sciences

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Crossing Borders – Terminological Resources and Open Science

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Outline

- Botany, including mycology, as a pilot project in BFT
- Botanical, mycological and microbiological terms
 - New Finnish words devised during science writing
 - Some other interesting examples

Pilot project of botany (1)

- Coordinated by Kaarina Pitkänen-Heikkilä (BFT) and professor Jouko Rikkinen (Department of Biosciences)
- Expert group assembled mainly from the members of Finnish Biological Society Vanamo
- 30 registered voluntary experts
- Amount of pages
 - Botany 2 683 concepts , 24 242 designations (65% defined)
 - Mycology 558 concepts, 1 878 designations (55% defined)
- Material for 2 000 concept page prepared on the grounds of 5 important sources
- 2 salaried botanists employed for 3 months
 - 600 concept pages in this method
- Good experiences in using term bank at the course “Introduction to botany” 2013-2015 (university lecturer Johannes Enroth)
 - Students working in groups defined approximately 50 concepts in a course -> teacher checked pages later
- Namespace of Botany with related disciplines in bio- and environmental sciences cover totally 25 630 concepts (68% of the all concepts in the BFT)

Pilot project of botany (2)

Plant morphology

- 1 156 concept pages, 100% defined
 - Prepared mainly in the BFT, checked out by experts
- Concepts have designations in different languages totally 7817
- Various concept relations mentioned
 - Generic relations in 843 concept pages
 - Part-whole relations in 295 concept pages
 - Property relations in 233 concept pages
 - Associative relations in 52 concept pages

New terms (1)

- Devised in the Vocabulary Group during the writing of *Sienten biologia (Biology of Fungi)*, published 2013
- Common terms:
 - amfifiilinen = **yhteisliukoinen**
 - heterofermentatiivinen käyminen = **sekatuotekäyminen**
- Cell biological terms:
 - appressorium = **painerihma**
 - dolipore septum = **tynnyrihuokosellinen** väliseinä
 - gravisuspektori = **painovoimatunnistin**
 - parentosomi = **kaitsinkalvo**
 - polar filament = **päätyneula**
 - spindle pole body = **sukkulanapa**
 - spitzenkörper = **kärkitihentymä**
 - statoliitti = **tasapainokivi**

New terms (2)

- Mycorrhizal types
 - arbuskelimykorrhiza = **keräsienijuuri**
 - arbutoidimykorrhiza = **talvikkisienijuuri**
 - ektomykorrhiza = **pintasienijuuri**
 - erikoidimykorrhiza = **kanervasienijuuri**
 - monotropoidimykorrhiza = **mäntykukkasienijuuri**
- Terms related to fungal spores
 - askolokulaarinen = **onteloitiökoteloinen**
 - annelidi = **rengaskuromaperä**
 - ballistospori = **ampuitiö**
 - blastinen kuromaperä = **vyötärökuromaperä**
 - thallinen kuromaperä = **pilkekuromaperä**

New Terms (3)

Vote among mikrobiologists

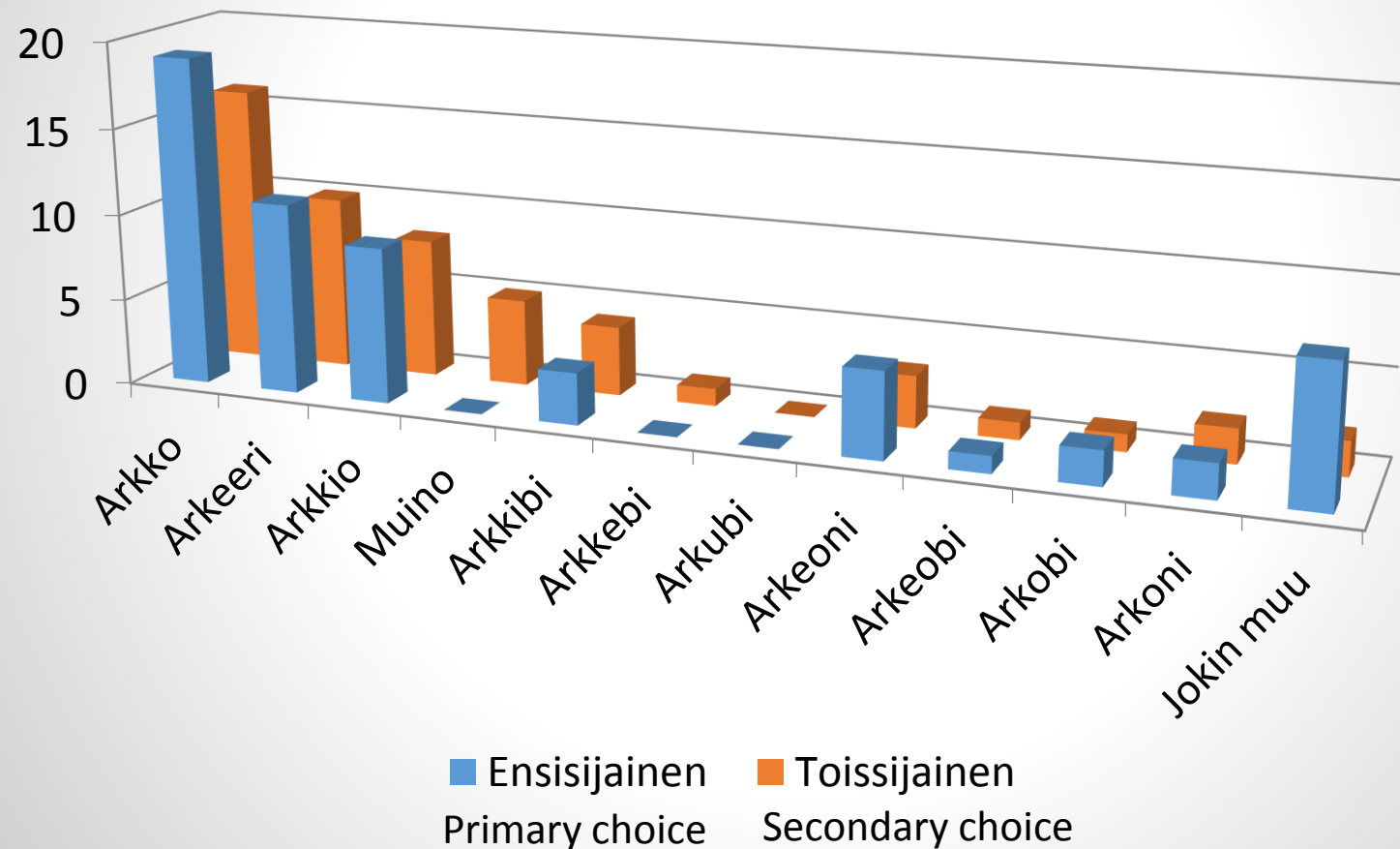


Figure: Stiina Rasimus-Sahari,
Inocula 2014


New terms (4)

Helsingin Sanomat (HS) competition and vote to the public

- 1 860 voters
- hundreds of designations made, e.g.:
 - erkki, mörkki, narkki, tsörkki, urkki, varkki, ärkki, örkki
 - alkeeri, ark, arkeija, arkkeri, arkokki, arska
 - entiö, ikieliö, ikiö, ylieliöinen, iku
 - sietiö, äärikkö, ääripöpö, ääriö, äärelö
 - sarkko, mikrio, mystiö
 - miuru, pläntti, pompelo

New terms (5)

Public HS vote from predefined choices



| Nimitys Designation | Ääniä (osuus kaikista äänistä) Votes given |
|------------------------|---|
| Arkki | 378 (20 %) |
| Arkeoni | 350 (18 %) |
| Arkko | 319 (17 %) |
| Muino | 194 (10 %) |
| Arkeeri | 191 (10 %) |
| Arkkio | 121 (7 %) |

Terminological work with *Suomen härmä-, ruoste-, noki- ja pöyhösienet* (*Powdery mildews, rusts, smuts and Exobasidium species of Finland*) (1)

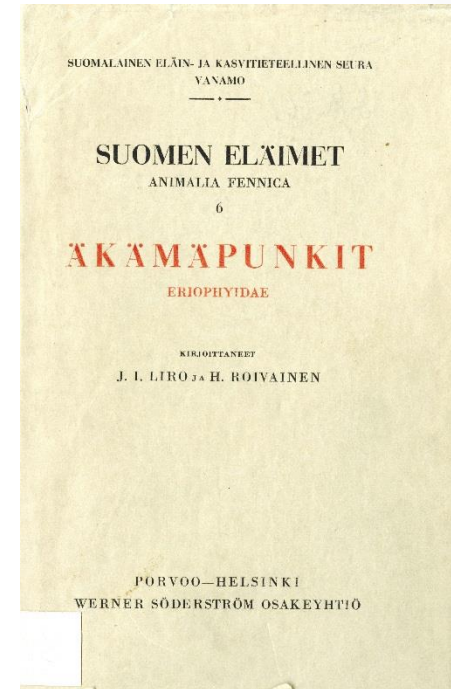
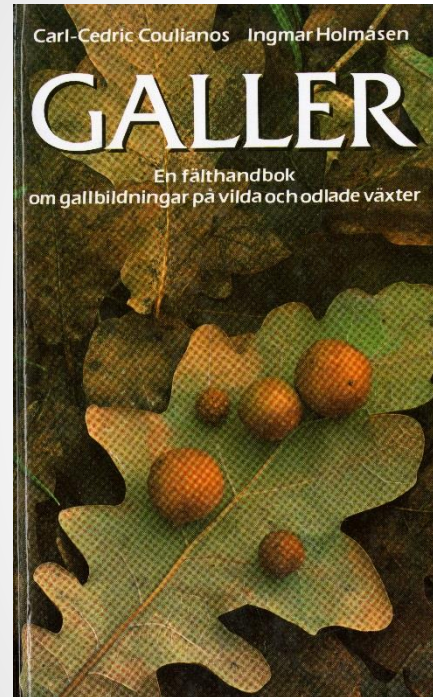
- Kotelopussi (chasmothecium), a new designation instead of kotelorakko (cleistothecium)
- Penetration/infection peg → tunkeutumistappi, tartuntatappi, infektiotappi???
- Musiform, a rare word = banana-like (genus *Musa*)
- Surculicolous infection, a rare and ambiguous term
 - *Dictionary of the Fungi*, 9th Edition: **surculicolous** (of *Exobasidium* infections) monocarpic and systemic in annual shoots
 - *Dictionary of the Fungi*, 9th Edition: **systemic** (of a parasite) spreading throughout the host

Terminological work with *Suomen härmä-, ruoste-, noki- ja pöyhösienet (Powdery mildews, rusts, smuts and Exobasidium species of Finland) (2)*

Äkämä (gall)

- In *BFT*: kasvien epämuodostuma, joka johtuu hyönteis-, sieni-, bakteeri- tai virusinfektiosta
- *British Plant Galls*, 2002: A gall is an abnormal growth produced by a plant or other host under the influence of another organism. It involves enlargement and/or proliferation of host cells and provides both shelter and food or nutrients for the invading organism.
- A very exceptional scientific concept! Or maybe, it is not really scientific ?

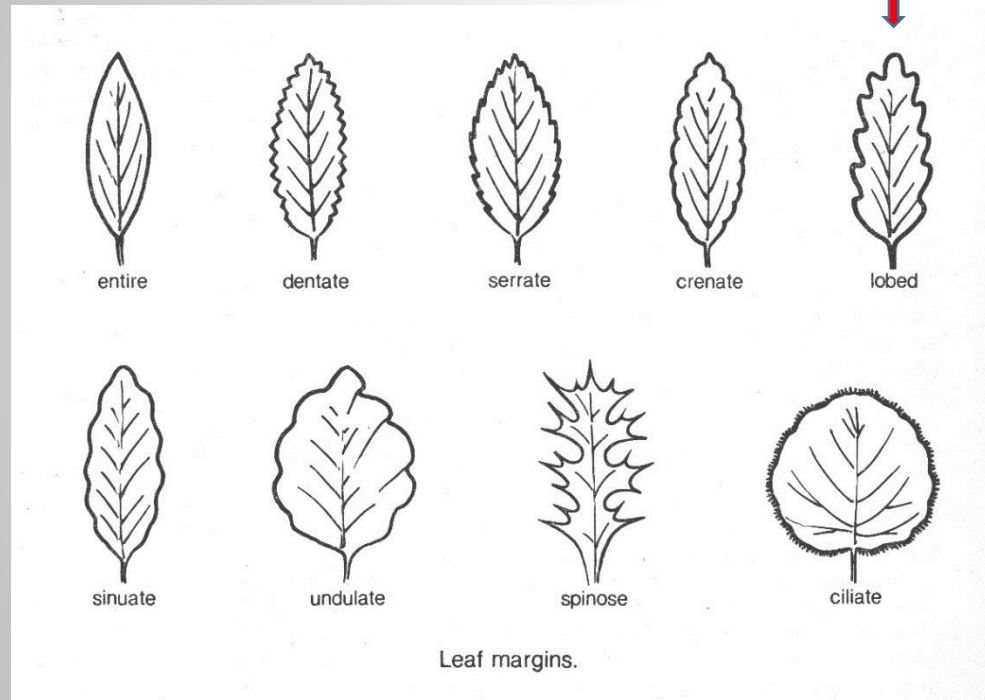
Terminological work with *Suomen härmä-, ruoste-, noki- ja pöyhösienet* (*Powdery mildews, rusts, smuts and Exobasidium species of Finland*) (3)



- *Biologian sanakirja*, 2006: **äkämä**, kasvien kasvuhäiriö, joka on ulkoisen ärsykkeen aiheuttama. Äkämää voi olla missä kasvinosassa tahansa, ja niitä saavat aikaan eräät sukkulamadot, äkämäpunkit ja lukuisat hyönteiset, kuten äkämäpistiäiset ja –sääsket, eräät ripsiäiset, kirvat, kempit, kärsäkkäät ja perhostoukat.

Botanical terms and problems

Leaf margin types



The Penguin Dictionary of Botany, 1984

Elaiosomi (elaiosome)

- A fleshy structure that is attached to the seeds of many plant species and provides food to the animals that disperse the seeds.
- 8 different types ?
- No proper names
- Developmental processes not well known
- Caruncle ?, strophiole?

It is exceedingly time-consuming to solve problems !